

REMARKS

Claims 1-23 are pending in the present Application. No claims have been canceled, no claims have been amended, and no claims have been added, leaving claims 1-23 for consideration upon entry of the present Amendment. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-23 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Smalley et al. (US2004/0040834) (hereinafter “Smalley”), as supported by Provisional Application 60/390,887 (hereinafter ‘887) in view of Schleier-Smith et al. (US 6,669,918) (hereinafter “Schleier-Smith”) and view of United States Patent Nos. 6,187,823 and 6,368,569 to Haddon *et al.* (“the Haddon patents”). (Office Action dated 8/14/2007, page 2). Applicant respectfully traverse this rejection.

Smalley was filed on March 4, 2003, and claims the benefit of three Provisional Patent Applications, the earliest priority date of which is March 4, 2002. The Applicant conceived and reduced to practice his invention sometime prior to March 4, 2002. Applicant respectfully direct the Examiner’s attention to Declaration submitted under 37 USC § 1.131, filed in the USPTO December 12, 2005, declaring and stating that the invention was conceived of in the United States and reduced to practice in the United States sometime prior to March 4, 2002. Evidence supporting conception and reduction to practice is provided with the Declaration. As acknowledged by the Examiner in the Office Action dated January 10, 2006, “[t]he affidavits filed on December 12, 2005 under 37 CFR 1.131. is sufficient to overcome the rejections based on the Smalley et al reference.” (Office Action dated 1/10/2006, page 5)

Accordingly, Applicant hereby requests withdrawal of the rejection applied to the claims under 35 U.S.C. §103(a), which is based at least in part on Smalley.

In view of the Declaration submitted under 37 USC § 1.131, filed on December 12, 2005, Applicant believes the rejection of claims 1-23 under 35 U.S.C. §103(a), over Smalley in view of Schleier-Smith and the Haddon patents should be withdrawn. In addition, the

Applicant maintains that without Smalley, the combination of Schleier-Smith with the Haddon patents fails to teach or suggest the claimed invention for the following reasons.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Independent claims 1, 14, and 19 are generally directed to a method of separating *met*-SWNTs from *sem*-SWNTs comprising employing a means for inducing selective *precipitation*, without adsorption to a template. Schleier-Smith, on the other hand, requires use of a template in separating SWNTs. Schleier-Smith itself states that it is directed to “a method for bulk separation of single-walled tubular fullerenes utilizing a template for adsorbing single-walled tubular fullerenes of a predetermined chirality.” (Col. 1, ll. 10-13, emphasis added) As stated in the Abstract as well as numerous times throughout Schleier-Smith, the template is exposed to a suspension of single walled tubular fullerenes of random chiralities for adsorption of single walled tubular fullerenes of the selected chirality into the openings of the template. (Abstract; col. 2, ll. 17-34)

Thus, Schleier-Smith does not disclose or suggest any method of separating *met*-SWNTs from *sem*-SWNTs without adsorption to a template, or a method for selective extraction of *sem*-SWNTs from a mixture of *sem*-SWNTs and *met*-SWNTs without adsorption to a template. Independent Claims 1, 14 and 19 positively exclude utilizing a template for adsorbing SWNTs. For this reason at least, Schleier-Smith does not disclose or suggest all of the limitations of the present claims.

The Haddon patents fail to remedy this deficiency. Specifically, the Haddon patents fail to compensate for the deficiencies of Schleier-Smith. The Haddon patents are directed to methods for solubilizing carbon nanotubes. (Abstract) While the Haddon patents disclose the separation of single walled carbon nanotubes from impurities (e.g., metal catalysts, nanoparticles, graphite, amorphous carbon, fullerenes, and other contaminants) ('823 patent, col. 3, ll. 59-65), the Haddon patents do not disclose or suggest separation of the different types of single walled carbon nanotubes from each other according to type (metallic (*met*-) vs. semiconducting (*sem*-)) and diameter. In fact, the Haddon patents focus only on the solubilization of single walled carbon nanotubes in general, and fail to distinguish between the different types of single walled carbon nanotubes altogether.

The Haddon patents certainly do not disclose a method of separating *met*-SWNTs from *sem*-SWNTs, or a method for selective extraction of *sem*-SWNTs from a mixture of *sem*-SWNTs and *met*-SWNTs, without adsorption to a template. Thus, the Haddon patents and, individually or in combination, do not disclose all of the elements of the claimed invention.

Further, as discussed in detail in the response filed March 15, 2007, the Applicant respectfully asserts that neither Schleier-Smith nor the Haddon patents, alone or in combination, suggest the separation methods as presently claimed.

In summary, in view of the Declaration submitted under 37 USC § 1.131, filed on December 12, 2005, the Applicant believes the rejection, applied to claims 1-23 under 35 U.S.C. §103(a), which is based at least in part on Smalley should be withdrawn. Further, the Applicant believes that the combination of Schleier-Smith with the Haddon patents do not teach or suggest the foregoing separations. Therefore, Applicant believes that the Examiner has not established a *prima facie* case of obviousness against claims 1, 14 and 19, as well as those claims that depend therefrom. Applicant respectfully request reconsideration and withdrawal of the rejection applied to Claims 1-23 under 35 U.S.C. § 103(a) and an allowance of the claims.

It is believed that the foregoing remarks and Declaration filed on December 12, 2005 fully comply with the Office Action and that the claims herein should be allowable to the Applicant. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this submission or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By /Ian J.S. Lodovice/
Ian J. S. Lodovice
Registration No. 59,749

Date: February 12, 2008
CANTOR COLBURN LLP
20 Church Street, 22nd Floor
Hartford, CT 06130-3207
Telephone (860) 286-2929
Facsimile (860) 286-0115
Customer No.: 23413